

## WHAT IS CLAIMED IS

1. A rotary fluid machine in which opposite ends of a rotor (22) are rotatably supported in a casing (11) via a first bearing (23f, 23r) and a second bearing (24),  
5 and energy conversion means for interconverting pressure energy of a working medium and mechanical energy of the rotating rotor (22) is provided in the rotor (22), characterized in that among the first bearing (23f, 23r) and the second bearing (24), the axial load can be supported by only the first bearing (23f, 23r).
2. The rotary fluid machine according to Claim 1, wherein the rotary fluid  
10 machine is an expander (E), and the energy conversion means is an axial piston cylinder group (56).
3. The rotary fluid machine according to Claim 1, wherein the rotary fluid machine is provided with a rotary valve (71) for supplying and discharging the working medium to and from the rotor (22), the coefficient of thermal expansion of  
15 the rotor (22) is set so as to be substantially the same as the coefficient of thermal expansion of the first bearing (23f, 23r), the coefficient of thermal expansion of the casing (11) is set so as to be larger than the coefficient of thermal expansion of the rotor (22) and the coefficient of thermal expansion of the first bearing (23f, 23r), the first bearing (23f, 23r) is supported in the casing (11) via a bearing holder (99), and  
20 the coefficient of thermal expansion of the bearing holder (99) is set so as to be substantially the same as the coefficient of thermal expansion of the rotor (22) and the coefficient of thermal expansion of the first bearing (23f, 23r).
4. The rotary fluid machine according to Claim 3, wherein the rotary fluid machine is an expander (E), and the energy conversion means is an axial piston  
25 cylinder group (56) operated by a swash plate (31).
5. The rotary fluid machine according to Claim 4, wherein the swash plate (31) is supported in the casing (11) via a swash plate holder (28), and the coefficient of thermal expansion of the swash plate holder (28) is set so as to be substantially the same as the coefficient of thermal expansion of the bearing holder (99).

6. The rotary fluid machine according to Claim 5, wherein the swash plate holder (28) and the bearing holder (99) are formed from the same member.